

I. Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 – 154 (cancelled)

Claim 155. (Currently amended) A spa control system, comprising:

- A) a spa controller,
- B) a interface signal converter, in communication with said electrically connected to said spa controller, said interface signal converter being operative for:
 - establishing a communications link with a remote computer; and
 - receiving communication signals conveying software components over the communications link, said software components comprising updates to software already installed on said spa controller;
 - communicating said software components to said spa controller;
- ~~C) a remote computer connected to said interface signal converter via a communications link, wherein said remote computer is used to download software to said spa controller,~~
wherein said interface signal converter converts communication signals ~~transferred~~ received from the said remote computer via said communications link and directs the converted signals to said spa controller, and wherein said interface signal converter converts signals from said spa controller to be communicated to the said remote computer via said communications link.

Claim 156. (Cancelled) ~~The spa as in Claim 155, wherein said software comprises updates to software already installed on said spa controller.~~

Claim 157. (Cancelled) ~~The spa as in Claim 155, wherein said remote computer monitors spa controller software installed on said spa controller, wherein said software downloaded from~~

~~said remote computer to said spa controller comprises updates to said spa controller software installed on said spa controller.~~

Claim 158. (Currently amended) The spa control system as in Claim 155, wherein said interface signal converter comprises an RS transceiver.

Claim 159. (Currently amended) The spa control system as in Claim 158, wherein said RS transceiver is an RS-485 transceiver.

Claim 160. (Currently amended) The spa control system as in Claim 155, wherein said interface signal converter comprises an IR transceiver.

Claim 161. (Currently amended) The spa control system as in Claim 155, wherein said interface signal converter comprises an RF transceiver.

Claim 162. (Currently amended) The spa control system as in Claim 155, wherein said interface signal converter is capable of transceiving at least two different types of communication signals.

Claim 163. (Currently amended) The spa control system as in Claim 155, wherein said at least two different types of communication signals is an RS differential signal and an IR signal.

Claim 164. (Currently amended) The spa control system as in Claim 155, wherein said interface signal converter is removably attached to said spa controller.

Claim 165. (Currently amended) The spa control system as in Claim 164, wherein said spa controller defines a cavity, wherein said interface signal converter is removably attached to said spa controller via said cavity.

Claim 166. (Currently amended) The spa control system as in Claim 155, wherein said interface signal converter is rigidly attached to said spa controller.

Claim 167. (Currently amended) The spa control system as in Claim 155, wherein said spa controller includes a body, said interface signal converter being is integrated into the body of said spa controller.

Claim 168. (Currently amended) The spa control system as in Claim 155, wherein ~~said remote computer is connected to~~ said interface signal converter is adapted for establishing a communications link with a remote computer over a wire-line link ~~via a communications wire~~.

Claim 169. (Currently amended) The spa control system as in Claim 155, wherein said communications link is a wireless communications link.

Claim 170. (Currently amended) The spa control system as in Claim 155, wherein said interface signal converter is adapted for establishing a communications link with a remote computer through a computer network ~~further comprising a second remote computer for sending commands to said spa controller and receiving data from said spa controller, wherein said second remote computer is connected to said spa controller via a computer network~~.

Claim 171. (Currently amended) The spa control system as in Claim 170, wherein said computer network is the Internet.

Claim 172. (Currently amended) The spa control system as in Claim 155, wherein said communications link is established over the Internet.

Claim 173. (Cancelled) ~~The spa as in Claim 155, wherein said remote computer is controlled by the spa owner.~~

Claim 174. (Cancelled) ~~The spa as in Claim 155, wherein said remote computer is controlled by the spa dealer.~~

Claim 175. (Cancelled) ~~The spa as in Claim 155, wherein said remote computer is controlled by the spa manufacturer.~~

Claim 176. (Cancelled) ~~The spa as in Claim 155, wherein said remote computer is controlled by the spa service technician.~~

Claim 177. (Cancelled) ~~The spa as in Claim 155, wherein said remote computer is controlled by the spa controller manufacturer.~~

Claim 178. (Cancelled) ~~The spa as in Claim 155, wherein said communications link comprises a computer network.~~

Claim 179. (Cancelled) ~~The spa as in Claim 178, wherein said computer network is the Internet.~~

Claim 180. (Currently amended) The spa control system as in claim 170 ~~Claim 178~~, wherein said computer network is a LAN.

Claim 181. (Currently amended) The spa control system as in Claim 155, wherein said remote computer is a PDA.

Claim 182. (Currently amended) The spa control system as in Claim 155, wherein said remote computer is a cellular phone.

Claim 183. (Currently amended) The spa control system as in Claim 155, further comprising a spa skirt, and wherein said remote computer is located underneath said spa skirt.

Claim 184. (Cancelled) ~~The spa as in Claim 182, wherein said remote computer is connected to a computer network.~~

Claim 185. (Currently amended) The spa control system as in Claim 155, wherein said remote computer is used to monitor and control the spa.

Claim 186. (Currently amended) A spa control system, comprising:

A) a spa controller means,

B) a interface signal converter means, in communication with said spa controller means, said interface signal converter means being operative for: electrically connected to said spa controller means, and

- establishing a communications link with a remote computer;
- receiving communication signals conveying software components over the communications link, said software components comprising updates to software already installed on said spa controller means;
- communicating said software components to said spa controller means;

~~C) a remote computer means connected to said interface signal converter means via a communications link, wherein said remote computer means is used to download software to said spa controller means;~~

wherein said interface signal converter means converts communication signals ~~transferred~~ received from said the remote computer means via said communications link, and wherein said interface signal converter means converts signals from said spa controller means to be communicated to said remote computer means via said the communications link.

Claim 187. (Currently amended) A spa control system, comprising:

A) a spa controller,

B) a interface signal converter, ~~electrically connected to~~ in communication with said spa controller, said interface signal converter being operative for and:

- establishing a communications link with a remote computer; and
- receiving data comprising a record of errors from said spa controller;
- transmitting a signal conveying the record of errors to remote computer over said communications link;

C) ~~a remote computer connected to said interface signal converter via a communications link, wherein data comprising a record of errors is automatically downloaded from said spa controller to said remote computer,~~

wherein said interface signal converter converts communication signals transferred from said the remote computer via said communications link and directs the converted signals to said spa controller, and wherein said interface signal converter converts signals from said spa controller to be communicated to said the remote computer via said communications link.

Claim 188. (Cancelled) ~~The spa as in Claim 187, wherein repairs are made to said remote computer based on said record of errors.~~

Claim 189. (Cancelled) ~~The spa as in Claim 187, wherein said remote computer is a troubleshooting tool that comprise a microprocessor and an error indicator.~~

Claim 190. (Currently amended) The spa control system as in Claim 187, wherein said communications link is a wireless communications link.

Claim 191. (Currently amended) The spa control system as in Claim 187, wherein said remote computer is a cellular phone.

Claim 192. (Currently amended) The spa control system as in Claim 187, wherein said interface signal converter is integrated into said spa controller.

Claim 193. (Currently amended) The spa control system as in Claim 187, wherein said interface signal converter comprises an IR transceiver.

Claim 194. (Currently amended) The spa control system as in Claim 187, wherein said record of errors comprises the number of times an error has occurred.

Claim 195. (Currently amended) A spa control system, ~~comprising comprising:~~

A) a spa controller,

B) an interface signal converter in communication with said spa controller, said interface signal converter being operative for exchanging signals with a hand-portable remote computer over a wireless communications link, wherein the signals include software components comprising updates to software already installed on said spa controller.

~~a wireless communications link, and~~

~~C) a hand-portable remote computer connected to said spa controller via said wireless communications link,~~

~~wherein said remote computer is used to download software to said spa controller.~~

Claim 196. (Currently amended) The spa control system as in Claim 195, wherein said hand-portable remote computer is a PDA.

Claim 197. (Currently amended) The spa control system as in Claim 195, wherein said hand-portable remote computer is a cellular phone.

Claim 198. (Currently amended) The spa control system as in Claim 195, ~~wherein said hand-portable remote computer comprises an interface signal converter,~~ wherein said interface signal converter converts ~~communication~~ signals transferred from said the hand-portable remote computer via said wireless communications link and directs the converted signals to said spa controller, and wherein said interface signal converter converts signals from said spa

controller to be communicated to said the hand-portable remote computer via said wireless communications link.

Claim 199. (Currently amended) The spa control system as in Claim 195, wherein said hand-portable remote computer is a palm pilot.

Claim 200. (New) A spa control system comprising:

- A) a interface signal converter;
- B) a spa controller in communication with said interface signal converter, said spa controller being adapted for controlling a set of spa components at least in part on the basis of software installed on said spa controller;
- C) said interface signal converter being operative for:
 - establishing a communications link with a remote computer;
 - receiving information conveying software components over the communications link;
 - transmitting signals conveying the software components to the spa controller;
- D) said spa controller being operative for:
 - receiving signals conveying the software components from said interface signal converter;
 - updating software already installed on said spa controller at least in part on the basis of the software components received from interface signal converter.

Claim 201. (New) The spa control system as in Claim 200, wherein said interface signal converter comprises an RS transceiver.

Claim 202. (New) The spa control system as in Claim 201, wherein said RS transceiver is an RS-485 transceiver.

Claim 203. (New) The spa control system as in Claim 200, wherein said interface signal converter comprises an IR transceiver.

Claim 204. (New) The spa control system as in Claim 200, wherein said interface signal converter comprises an RF transceiver.

Claim 205. (New) The spa control system as in Claim 200, wherein said interface signal converter is capable of transceiving at least two different types of communication signals.

Claim 206. (New) The spa control system as in Claim 205, wherein said at least two different types of communication signals include an RS differential signal and an IR signal.

Claim 207. (New) The spa control system as in Claim 200, wherein said interface signal converter is removably attached to said spa controller.

Claim 208. (New) The spa control system as in Claim 200, wherein said interface signal converter is rigidly attached to said spa controller.

Claim 209. (New) The spa control system as in Claim 200, wherein said spa controller include a body, said interface signal converter being an integral part of the body of said spa controller.

Claim 210. (New) The spa control system as in Claim 200, wherein said interface signal converter is adapted for establishing a communications link with a remote computer over a wire-line link.

Claim 211. (New) The spa control system as in Claim 200, wherein said communications link is a wireless communications link.

Claim 212. (New) The spa control system as in Claim 200, wherein said interface signal converter is adapted for establishing a communications link with a remote computer through a computer network.

Claim 213. (New) The spa control system as in Claim 212, wherein said computer network is the Internet.

Claim 214. (New) The spa control system as in Claim 200, wherein said remote computer is a PDA.

Claim 215. (New) The spa control system as in Claim 200, wherein said remote computer is a cellular phone.

Claim 216. (New) A computer readable storage medium including a program element suitable for execution by a computing apparatus for implementing a system for monitoring a spa controller, the computing apparatus including:

- a memory unit; and
- a processor operatively connected to the memory unit, said program element when executing on said processor being operative for:
 - a) establishing a communications link with a spa controller;
 - b) transmitting information conveying software components over the communications link, the software components being adapted to cause software already installed on the spa controller to be updated.

Claim 217. (New) A computer readable storage medium as defined in claim 216, wherein said computing apparatus is a PDA.

Claim 218. (New) A computer readable storage medium as defined in claim 216, wherein said computing apparatus is a cellular phone.

Claim 219. (New) A computer readable storage medium as defined in claim 216, wherein said communications links is a wireless link.